

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: July 24, 1990
SUBJECT: Review of Wetlands Delineation Report
American Chemical Services
FROM: Eileen Helmer, Ecologist *E. Helmer*
Technical Support Unit
TO: Robert Swale, RPM
IL/IN Unit #2

Per your request dated June 19, 1990, the Wetlands Delineation Report (the Report) for American Chemical Services (ACS) was reviewed by various persons from the Biological Technical Assistance Group, including Mark Sprenger of the Environmental Response Team, persons from the Wetlands Protection Section (WPS - copy attached) and myself. A summary of the comments and some additional recommendations for the site follow.

Overall Significance The report documents the presence of and classifies wetlands at and near the site. Because wetlands are considered "sensitive" (or valuable) ecosystems and support wildlife, the delineation report is necessary for an ecological assessment and can help to direct any further investigations on site ecological impacts.

Overall Methodologies The U.S. Fish and Wildlife Service (FWS) used the hydric soils routine assessment procedure from the Federal Manual for Identifying and Delineating Jurisdictional Wetlands (the Manual) to delineate the wetland areas. Several of the steps for this procedure were not discussed in the Report or were not correctly followed and are mentioned below. However, the fact that emergent wetlands are bordered by scrub/shrub and forested ones indicates that conditions may too non-homogeneous for this routine procedure to be appropriate.

Specific Comments

Pg. 4, para. 1 - In using the hydric soils assessment procedure, the approximate limits of areas that may meet hydric soils criterion should be outlined on an aerial photo as the first step. The report only states that "Points along the visual perimeter of the wetland were randomly selected..." and, in paragraph 3, that " a U.S. Soil Conservation Service Soil Survey... was consulted." The Report should state precisely whether areas with hydric soils were outlined (as they apparently were in Fig. 3), and precisely how this information was used.

Page 4 -

- The methodology also requires scanning for areas with disturbed conditions. A statement regarding whether disturbed conditions exist would be useful in this portion of the Report.
- In addition, a description of signs of wetland hydrology in areas shown with hydric soils would be helpful (see Step 3 in the Manual).
- Soil chroma colors should generally be estimated in the field at the time of sample collection, and the soil should be moistened as necessary at that time (see comment 1 in attachment).

Selection of Sampling Points - Additional sampling points should be included where sampled areas lacked all three wetland characteristics (and a more precise delineation is warranted).

Page 9, para. 2 - The Report states that certain species were not included in dominance calculations. As stated, the Report is somewhat confusing. For those species which do not have an indicator status in the state list of plant species occurring in wetlands, the indicator status in the National List of Plant Species that Occur in Wetlands should be used. Those species listed in neither the state or national lists should be assumed to be upland species (indicator status UPL). The Report should state precisely whether species were found in neither of the above lists or simply did not have an indicator status listed.

Page 10, Table 2 - The heading "Hydrophytic Vegetat/%OBL, FACW, FAC" should read: "% of Dominant Plant species which are OBL or FACW," as that is the criteria which determines the presence of hydrophytic vegetation using the soils procedure (note that this suggested heading eliminates the FAC category because the soils assessment procedure specifically requires that OBL and FACW species dominate or a more rigorous procedure be used for delineation).

Page 11, Fig. 5 - This figure should contain a key to the wetland classifications shown. The Report should describe how these final wetland boundaries were determined. The Report does not give an approximation of the number of acres of wetland present in the figure (though the procedures used may not be allow determination of a precise wetland/non-wetland boundary).

Appendix 2 - The Field Data forms do not specify a rationale for determination that hydrologic criteria for a wetland are met. The rationale could be explained in the Report text.

Additional Recommendations -

- These wetlands should be taken into consideration when designing any type of ground water pumping system which might affect ground water levels in the area.

-3-

- Once you have received results from wetland area sampling, a BTAG meeting can be arranged to discuss what further investigations are warranted.

If you have any questions about these comments or need any further assistance, please do not hesitate to contact me at FTS 886-4828.

ATTACHMENT

cc: Steve Ostrodka, TSU
Mark Sprenger, ERT
Douglas Ehorn, WPS

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

DATE: JUL 27 1990

SUBJECT: Review of USFWS Wetland Delineation at ACS Site, Griffith IN

FROM: Douglas A. Ehorn, Deputy Chief
Water Quality Branch

TO: Stephen L. Ostrodka, Chief
Technical Assistance Unit

Per your request, we have reviewed the United States Fish and Wildlife Service (USFWS) delineation report dated June 5, 1990 for the American Chemical Services (ACS) site, and offer the following comments:

The delineation procedures in the report do not follow those indicated in the Federal Manual for Identifying and Delineating Jurisdictional Wetlands and therefore the conclusions in the report cannot be verified. In order for us to review the report and its conclusions, USFWS must provide additional information and make several modifications and corrections, as follows:

1. Under METHODS on page 2, the report states that the soils assessment procedure was selected. The Hydric Soils Assessment Procedure is described in Section 4.10 of the Manual. Step 4 of this procedure requires the observer to compare soil samples to the descriptions in the soil survey. These comparisons, by means of the Munsell color chart, are best done in the field at the time of sample collection. The observers apparently "observed" the soil colors in the field but did not compare them to the Munsell chart until later, presumably in the office. Drying and/or oxidizing of the samples may change their colors. Also, reading the samples under artificial light, as found in an office, may render a different hue, value, or chroma than reading the sample in natural light. What is the rationale for apparently not reading the samples at the time of collection? Regardless of any "legal" requirements that may be involved in preserving a soil sample the comparison to the Munsell chart should be made in the field for the purposes of the Delineation Manual procedures.

2. Step 8 of the Hydric Soil Assessment Procedure requires the observer to record the indicator status of dominant species. In the data sheets attached to the report, many dominant species are listed as having no indicator status, and the narrative on page 9 of the report states that these species were not calculated into the percentages of dominants. The absence of a species from the National List of Plant Species that Occur in Wetlands should be interpreted to mean that the species is considered an upland species. Therefore, these species, especially well-known species such as Quercus velutina, should be included in the calculations as upland species.

3. Step 9 of the Hydric Soils Assessment Procedure states that the requirement for meeting the hydrophytic vegetation criterion is that the estimated percent aerial coverage of dominant Obligative (OBL) and Facultative Wet (FACW) species must exceed that of the dominant Facultative Upland (FACU) and Upland (UPL) species. This means that Facultative (FAC) species are not considered in this procedure. The data sheets in the report indicate that FAC species were indeed considered and that the percentage of OBL, FACW, and FAC species was used to determine compliance with this criterion. This analysis of dominant species is used for the Plant Community Assessment Procedure and the two procedures cannot be hybridized in this fashion. Since the report stated that the Hydric Soils Assessment Procedure was used, the determination of dominance by hydrophytic vegetation must be done according to Step 9 of that procedure. Also, regardless of which procedure is used, the species not appearing on the National List must be considered to be UPL.

Also, we would need more information explaining how the observers drew the wetland boundaries in Figures 5 and 6 after determining that observation areas were or were not wetlands. Did they follow contour lines or changes in vegetation or soil types between sampling points?

Finally, it would also be helpful if Figures 5 and 6 in the report clearly distinguished between the original National Wetlands Inventory wetlands and the additional wetlands delineated by this investigation.

We cannot give you a complete evaluation of this delineation and its meaning until the corrections in procedure are made. Also, it should be noted the manual procedures discussed above are applicable only to the characterization of the upper soil layer and may not reflect the presence of special circumstances in the lower soil horizons that have a controlling effect on the dominant vegetative cover of the site. Elwan (AAG, 1971) has mapped the occurrence of a clay layer at a depth of about four feet in the soils of the Valparaiso Moraine, that has apparent significance for the establishment of an Oak-Hickory forest cover dominance. It is therefore necessary to confirm the presence and effect of a clay layer at the ACS site if groundwater manipulations are anticipated as a part of the site remediation. These considerations are, however, beyond the scope of the Delineation Manual procedures and will not be addressed further in our review of the USFWS effort.

cc: Tom Glatzel
Rod Walton w/incoming